SOUTH FLORIDA WATER MANAGEMENT DISTRICT



Follow-up Report Audit of Construction Contracts

Audit #97-09

Prepared By

Office of Inspector General

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TABLE OF CONTENTS

Page

BACKGROUND	1
OBJECTIVES, SCOPE AND METHODOLOGY	IETHODOLOGY 2 3 3 S BY RECOMMENDATION 4 yment Form 4 Redundancy 5 f Lie n 5 enditures 8 enties 9 10 10 ellular Telephone Usage 11 ory of Electronic Components 12
JECTIVES, SCOPE AND METHODOLOGY MMARY LLOW-UP OBSERVATIONS BY RECOMMENDATION Administrative Contract Briefing and Payment Form Construction Project File Redundancy Subcontractor Release of Lie n Certificates of Insurance	3
FOLLOW-UP OBSERVATIONS BY RECOMMENDATION	
A. Administrative	4
Contract Briefing and Payment Form	4
Construction Project File Redundancy	5
Subcontractor Release of Lie n	5
Certificates of Insuranœ	6
B. Financial and Accounting	8
Recording of Capital Expenditures	8
Minimum Criteria for Sureties	9
Liquidated Damages	10
Internal Controls Over Cellular Telephone Usage	11
Capitalization and Inventory of Electronic Components	12
Account Classification of ENR Projects	13

		Page
C.	Procurement	14
	Impact of Disparity Study	14
	Construction Management Reorganization	14
	Contractor Reviews	15
D.	Project Management	15
	ENR Wetland Research Test Cells	15
	ENR Pump Stations	16
	Specification of Levee Height	17
	Notice to Proceed for Change Orders	18
E.	Efficiency and Performance Measures	18
	Development of Performance Measures	18
	Cost of Construction Management Operations	19
F.	Capital Expenditure Budgeting and Necessity	20
	Justification for Construction Projects	20
	Five-Year Capital Program	20
	Machine Shop Size	21
	S-13 Repowering	21
	Engine Selection for Repowering	22

South Florida Water Management District

Follow-up Review

Audit of Construction Contracts

BACKGROUND

On July 5, 1995, the Office of Inspector General issued the Audit of Construction Contracts, Audit #95-03. The Audit covered a period from October 1, 1991 to September 30, 1994 and was performed in order to determine whether the Construction Management Department, subsequently incorporated into the Construction & Land Management Department (CLM):

- ! followed sound procurement policies,
- ! acquired the appropriate type, quality, and amount of resources when needed at the lowest cost,
- ! properly protected and maintained those resources,
- ! avoided duplication of effort and used efficient operating procedures,
- ! has an adequate system to measure and report performance on economy and efficiency, and
- ! complied with the requirements of laws, regulations, and policies that could significantly affect the acquisition, protection, and use of District resources.

The resultant report contained 24 findings and 37 recommendations. Management concurred with all but one of the recommendations and agreed to implement them at various dates between August and December 1995.

OBJECTIVES, SCOPE AND METHODOLOGY

Generally Accepted Government Auditing Standards (GAGAS) and the Standards for the Professional Practice of Internal Auditing (the "Standards") require that we perform follow-up audits to determine that agreed upon management action was taken and is achieving the desired results or that senior management or the Governing Board has assumed the risk of not taking appropriate action on reported findings. Follow-up audits assess the adequacy, effectiveness, and timeliness of action taken by management on reported findings. Much of the benefit from audit work is not in the findings reported or the recommendations made, but in their effective implementation and resolution.

Accordingly, we performed follow-up audit procedures which included:

- ! discussing the current implementation status with the appropriate levels of management responsible for taking action,
- ! evaluating the adequacy and effectiveness of the action taken by management,
- ! assessing the adequacy of documentation supporting the action taken, and
- ! applying other follow-up audit procedures as deemed necessary and appropriate.

Our review used the follow-up standards described below for assessing the extent of corrective action, if any:

Implemented - Action has been taken to adopt the recommendation or an alternative approach was taken that achieved the same objective.

Partially Implemented - We observed that action was in process that will implement the recommendation or the recommendation=s objective.

Not Implemented - There was insufficient evidence of implementation action being taken or District management disagreed with the recommendation

No Longer Applicable - Alternative action was taken or there was a substantial change in circumstances that rendered the recommendation moot.

SUMMARY

The following table summarizes the implementation status based on the type of recommendation. Following this table is a narrative that summarizes the implementation status based on the responsible department/division.

Recommendation Type	Implemented	Partially Implemented	Not Implemented	No Longer Applicable	Totals
A. Administrative	4	3			7
B. Financial and Accounting	6	3	2	1	12
C. Procurement	2	1			3
D. Project Management	5	2			7
E. Efficiency and Performance Measurements	1	1			2
F. Capital Expenditure Budgeting and Necessity	3	3			6
Totals	21	13	2	1	37

The Construction & Land Management Department (CLM) was responsible for implementing 18 of the recommendations. They had sole responsibility for 14 of the recommendations and shared responsibility with other departments for the remaining 4. Of the 18, 12 were deemed fully implemented and 6 were partially implemented.

The Procurement Division was solely responsible for implementing 8 of the recommendations, of which 5 were fully implemented and 3 were partially implemented.

Of the remaining recommendations the Risk Management Division either implemented or partially implemented all three of the recommendations that they were responsible for; the Accounting Division implemented or partially implemented two of the five recommendations that they were responsible for;

ERD and the Office of Supplier Diversity implemented the one recommendation that each was solely responsible for and the Office of Enterprise Engineering partially implemented the one recommendation that it was responsible for.

FOLLOW-UP OBSERVATIONS BY RECOMMENDATION

A. Administrative

A.1. Contract Briefing and Payment Form: Eliminate redundant systems and create an automated *Contract Briefing and Payment Form* to be put on a file server so that it would be available to Project Managers, Construction Engineers and Contract Administrators.

Responsible Division: Procurement **Estimated Completion Date:** December 1995

Status: Partially Implemented

Management Action: The District has acquired project management software with the ability to track cost, schedules, correspondence, contracts, change orders and contract payments. The system is currently under development. It will not duplicate information in the LGFS system and CIS. After implementation, the system will be extended to all ERD and CLM construction contracting activity undertaken by the District. Implementing the reengineered procurement process over the next year will automate all manual contracting processes, including construction contracting.

The reengineering of the post-award/administration phases of procurement is scheduled for June 1997, at which time specific attention will be given to developing a system to automate the tracking of invoices and payments. At that time, an automated *Contract Briefing and Payment Form* will be considered for integration into such a system.

A.2. Construction Project File Redundancy: Clearly define the documentation requirements of all of the parties involved in the construction project process by designating who maintains original documents and who receives copies. Only original documentation should be retained in offsite storage.

Responsible Division: Procurement **Estimated Completion Date:** October 1995

Status: Partially Implemented

Management Action: The Procurement Division, in a memo dated February 1996, provided direction to CLM management and various individuals in ERD, Office of Counsel and Risk Management. The memo outlines which department/division/office is responsible for maintaining originals of construction contract documents and which department/ division/office is responsible for maintaining copies. Management has not implemented the recommendation to retain only original documents in off-site storage.

A.3. Subcontractor Release of Lien: Before a contract is closed the District requires that a *Waiver* or *Release of Lien* be received from each subcontractor who sent a *Notice To Owner* (an ANTO@). Construction subcontractors send NTO=s to the property owner (in this case the District) stating that the subcontractor has provided services and/or materials to the owner=s property and that failure, by the owner, to ensure that the subcontractor is paid may result in a lien against the property. In response to the NTO, an attorney in the Office of Counsel sends a letter to the subcontractors informing them that the District, as a governmental entity, is not subject to the provisions governing construction liens. The responsibility for sending these letters to subcontractors should be transferred from the Office of Counsel to the Procurement Division.

Responsible Division: Procurement **Estimated Completion Date:** July 1995

Status: Implemented

Management Action: The letters to subcontractors, in response to NTO=s, are now being sent by Procurement Division staff.

A.4. Certificates of Insurance:

! Construction projects should not be allowed to begin until the contractors provide the District with a completed *Certificate of Insurance*.

Responsible Division: Procurement **Estimated Completion Date:** October 1995

Status: Implemented

Management Action: The Procurement Division=s Standard Operating Procedure No.7, dated November 15, 1995, states that Athe contract/P.O. will not be executed until a (correct) certificate is received and approved. We noted that contract C-7025, B-50 Renovations, was held up for several months due to inadequate insurance certificates.

! The bid package for construction contracts should include a sample Certificate of Insurance with all of the required coverages.

Responsible Division: Procurement **Estimated Completion Date:** October 1995

Status: Implemented

Management Action: The Procurement Division-s Standard Operating Procedure No.7, dated November 15, 1995, requires that a District *Certificate of Insurance* be included in the bid. We noted the inclusion of a *Certificate of Insurance* in ECP bid package.

! Contractors who do not submit *Certificates of Insurance* in a timely manner should be sanctioned.

Responsible Division: Procurement **Estimated Completion Date:** October 1995

Status: Implemented

Management Action: The Procurement Division sends a notification letter to contractors *after* insurance coverage has expired. If an updated *Certificate of Insurance* is not received, the contractor is notified by certified letter that the District considers a lapse in insurance coverage to be a breach of contract which must be remedied or default termination may ensue. Notifying contractors, of a lapse in insurance coverage, after the fact, may result in a contractor performing under the contract without the required insurance coverage. This increases the risk of loss to the District. In order to avoid a lapse in coverage, thus limiting exposure to the District, we suggest that the notification letter be sent *prior* to expiration of a line of insurance coverage. This should give the contractor sufficient time to provide the District with an updated *Certificate of Insurance*.

! The Risk Management Division should take the lead role in monitoring Certificates of Insurance.

Responsible Division: Risk Management **Estimated Completion Date:** October 1995

Status: Partially Implemented

Management Action: Risk Management is reviewing *Certificates of Insurance* for adequacy, however, the Procurement Division is still monitoring insurance coverage expiration dates and sending the notification letters. Management should evaluate whether splitting the insurance monitoring function in this manner is the most efficient and effective solution.

B. Financial and Accounting

B.1. Recording of Capital Expenditures: Department financial analysts, not the Accounting Division, should be responsible for coding expenditures as either current operating or as capital outlay. The financial analysts are the most familiar with the nature of the expenditure and have the first opportunity to make this decision. Accounting subsequently reclassifies expenditures when they perform a review of the Capital Project Funds or when they research completed projects.

Responsible Division: Accounting

Estimated Completion Date: September 1,1995

Status: Not Implemented

Management Action: The Accounting Division, not the department financial analysts, still has the lead role in determining whether an expenditure is capital or operational in nature, and does so after it has already been initially recorded as an operating expenditure. The Accounting Division sent an informational memo, describing fixed asset policy and general information, to all District Department/Office and Division Directors in September 1996. However, the memo states that Accounting reviews Capital Projects Funds - Activity Codes directly related to a project and determines if the charge is capitalized.@ Additionally, Accounting Division staff researches completed projects (reviews the CAARF for evidence of design and/or engineering contracts) in order to ensure that engineering and design contract costs have been properly capitalized.

We noted that approximately \$495,000 of engineering services relating to B-50 renovations were recorded as operating expenditures when consideration should have been given to classifying such as capital outlay expenditures and recording them in the fixed asset accounts. Significant capital expenditures should be capitalized in a more timely manner. Proper coding by Departments=Financial Analysts with subsequent review by Accounting would assure that all costs are properly classified.

According to the Director of Accounting and Financial Services,

management concurs that a more timely review of capital related ancillary costs, such as project engineering for the purposes of determining capitalization eligibility and inclusion in fixed assets is desirable. He further indicated that, "An alternate approach to more timely capitalization of ancillary costs might be to include these costs in construction in process when it is determined that a project will result in a fixed asset." When the project is complete, and all costs have been recorded in construction in process, the accumulated costs would be transferred and allocated to the other asset categories within the General Fixed Asset Account Group.

B.2. Minimum Criteria for Sureties:

! Risk Management should review the adequacy of construction related bonds.

Responsible Division: Risk Management **Estimated Completion Date:** December 1995

Status: Implemented

Management Action: Risk Management is now performing a review of the adequacy of construction related bonds.

! Implement the recommendations in the consultant prepared construction bond study.

Responsible Division: Procurement **Estimated Completion Date:** October 1995

Status: Implemented

Management Action: Minimum criteria for sureties has been established based on the dollar value of the contract, checklists are used, and bond requirements are reduced or waived under certain circumstances in order to enhance participation by minority contractors.

! A study, similar to the construction bond study, should be performed with respect to insurance requirements on construction projects.

Responsible Division: Risk Management **Estimated Completion Date:** December 1995

Status: Partially Implemented

Management Action: The Risk Management Division=s Administrative Policy and Procedure Guide entitled Risk Management Requirements for Construction Contracts was reviewed by the same consultant that performed the construction bond study. A report on that review was issued on September 20, 1995. The scope of the review was significantly less than that of the bond study and did not address minimum rating criteria for companies that provide contractors with auto, workers=compensation and general liability insurance. We would like to see a study performed on construction contract insurance requirements with a scope similar to that of the one done for bond requirements.

B.3. Liquidated Damages:

! Liquidated damages should be assessed when the circumstances warrant it.

Responsible Department: Construction & Land Management

Estimated Completion Date: August 1995

Status: Implemented

Management Action: We noted at least one instance where liquidated damages of \$21,700 were assessed against a contractor in January 1996. Prior to our recommendation, liquidated damages had never been assessed.

! Better care should be taken to ensure that the liquidated damage amount in the *Notice to Proceed* agrees to the amount per the contract.

Responsible Division: Construction **Estimated Completion Date:** August 1995

Status: Implemented

Management Action: The Construction Engineers are now responsible for making sure that this situation does not occur in the future.

B.4. Internal Controls Over Cellular Telephone Usage:

! Periodic audits of cellular telephone bills should be performed and a formal policy on cellular telephone usage should be developed.

Responsible Office: Office of Enterprise Engineering

Estimated Completion Date: September 1995

Status: Partially Implemented

Management Action: The Office of Enterprise Engineering has developed an Aas is@ model of the cellular telephone personal call reimbursement process and is exploring various alternatives to our recommendation for periodic audits. Guidelines for the use of District cellular telephones have been developed by the Information Technology Infrastructure Management Division. These guidelines are incorporated into a Cellular Phone Acknowledgment that users are required to sign. However, Management still needs to perform periodic audits of cellular telephone bills.

! Amounts identified by the audit as charges for personal calls should be collected from those employees.

Responsible Department: Construction & Land Management

Estimated Completion Date: September 1995

Status: Implemented

Management Action: Management has received reimbursement for the personal calls identified during the audit.

B.5. Capitalization and Inventory of Electronic Components:

! The value of electronic parts inventory should be estimated and recorded in the inventory system.

Responsible Divisions: Accounting/Electronics

Estimated Completion Date: September 1995

Status: No Longer Applicable

Management Action: The Accounting Division reviewed controls over electronic parts inventory and concluded that the costs associated with capitalizing the inventory, either by estimate or through integration with the Districts perpetual inventory system, would exceed the benefits derived.

! Management should establish a method to determine in-house labor costs for District constructed equipment and capitalize such amounts.

Responsible Divisions: Accounting/Electronics

Estimated Completion Date: September 1995

Status: Partially Implemented

Management Action: The Electronic Support/Data Acquisition Division is currently working with the Accounting Division to determine the best way to capture in-house labor costs.

B.6. Account Classification of ENR Projects:

! Determine whether new asset categories are necessary for the construction of Storm Water Treatment Areas (STA=s).

Responsible Division: Accounting Estimated Completion Date: Ongoing

Status: Implemented

Management Action: The Accounting Division reviewed the ENR contracts and concluded that new asset categories were not needed. While we classified this recommendation as implemented, the Accounting Division may wish to revisit this issue. A system should be developed that will effectively distribute the costs of individual construction contracts awarded under the Everglades Construction Project (ECP), which actually is composed of 55 projects divided into seven categories delineated in the Everglades Forever Act. The Ecosystem Restoration Department currently has a Master Project Planning System that captures and tracks the ECP components by STA. However, to the extent that individual construction contracts benefit different aspects of the project, the costs should be separately accounted for because of funding issues. For example, the construction costs on an individual contract should segregate capital costs which will benefit pollution abatement from capital costs that benefit hydropattern restoration. Recent debate, that prompted the issuance of the District authored Everglades Cost Allocation Report, makes it abundantly clear that more refinement may be necessary in our official accounting records as to how we will record the capital costs of this program.

! Disclose the accumulated costs of ECP construction projects separately in the District=s Comprehensive Annual Financial Report.

Responsible Division: Accounting Estimated Completion Date: Ongoing

Status: Not Implemented

Management Action: The accumulated costs of Everglades Construction Projects were not separately disclosed in the General Fixed Asset Account Group of the Districts FY96 Comprehensive Annual Financial Report, however, detailed records of the project are being maintained.

C. Procurement

C.1. Impact of Disparity Study: Determine the cost/benefit of each of the Disparity Study's recommendations, rank them from high to low, and implement them in that order.

Responsible Division: Supplier Diversity & Outreach

Estimated Completion Date: November 1995

Status: Implemented

Management Action: The <u>Tactical Implementation Plan for MBE Program</u> prioritized the Disparity Study-s twenty-five recommendations based on various factors including the costs and benefits.

C.2. Construction Management Reorganization: The Construction & Land Management Department should communicate and coordinate any changes in the construction contracting process with other departments, most notably the Ecosystem Restoration Department, undertaking construction activity.

Responsible Departments: Construction & Land Management/

Ecosystem Restoration Department

Estimated Completion Date: November 1995

Status: Implemented

Management Action: ERD and CLM personnel are attending joint training sessions; they share roles in the Everglades Construction Project management, and working together, developed uniform boilerplate construction contract documents.

C.3. Contractor Reviews: With regard to reviewing the financial capability of contractors, curtail the use of District resources to gather, evaluate, compile or confirm information that does not provide value added steps to the construction contract award process.

Responsible Division: Procurement

Estimated Completion Date: Ongoing

Status: Partially Implemented

Management Action:

Management has prepared draft criteria for obtaining Dunn & Bradstreet reports. Factors that will be considered are: whether there is requirement for payment and performance bonds, project complexity, time sensitivity of the project, and prior knowledge of the contractor.

D. Project Management

D.1. ENR Wetland Research Test Cells: Establish a time frame for placing the Test Cells Project in operation and implement planned research programs to ensure that the District meets the DEP's extension date and provide the research for optimizing nutrient removal technology as originally intended.

Responsible Department: Ecosystem Restoration

Estimated Completion Date: September 1995

Status: Implemented

Management Action: Since the audit was completed, a seepage/leakage assessment was completed, a request was made of the FDEP for extension of the permit, and the final design of the test cell modifications was completed. A bid opening took place on March 4, 1997, and a contractor was selected to perform the work. The project is scheduled to be completed within 210 days from the Notice to Proceed.

D.2. ENR Project Pump Stations:

! In order to avoid problems similar to those that occurred with the ENR Pump Stations, management should assess the risks when electing to use systems that are different from those more widely used.

Responsible Department: Construction & Land Management

Estimated Completion Date: Ongoing

Status: Partially Implemented

Management Action: An independent consulting firm was contracted to perform a review of the problems associated with the ENR Pump Stations and concluded that the failures were the result of poor design, gearbox failures, motor failures, vibration, electrical outages and poor operation. The only pump station that has been repowered since the audit is S-140. The reconditioned Detroit Diesel engines used in the repowering were obtained from the U.S. Coast Guard. Alternative systems are currently being considered for the Everglades Restoration Project and we expect management to assess the potential risks inherent in these systems.

! Perform an analysis of pump station component costs over the life of the component.

Responsible Department: Construction & Land Management

Estimated Completion Date: Ongoing

Status: Implemented

Management Action: The District has solicited bids for engines, right-angle drives and pumps for pump stations G-310 and G-335, which are components of the Everglades Restoration Project. Included in the bid document is the requirement that the bidder provide an estimate of the present value of the maintenance cost of the equipment.

! Evaluate warranties and consider parts and service warranties for major pumping system components.

Responsible Department: Construction & Land Management

Estimated Completion Date: Ongoing

Status: Implemented

Management Action: The *Request for Proposal* for contract C-E203, an Everglades Construction Project, specifies a warranty period the lesser of two years after the goods are placed into service or four years after acceptance of the goods by the District. Additionally, contractors are required to bid on the extended warranty.

! Consider whether we have a claim against the design engineer.

Responsible Department: Construction & Land Management

Estimated Completion Date: Ongoing

Status: Implemented

Management Action: Upon consideration of the consultants report on the reasons for the ENR Pump Station failures, the Office of Counsel performed a review of the issue and recommended against pursuing legal action.

D.3. Specification of Levee Height: Design requirements such as minimum levee height should be specified in the contract documents.

Responsible Division: Construction **Estimated Completion Date:** Ongoing

Status: Implemented

Management Action: We reviewed the drawings for Contract C-E600, which is a contract for the construction of STA 6, Section 1, and noted that the elevation of the top of the levee height was specified.

D.4. Notice To Proceed for Change Orders: Incorporate the Notice To Proceed process into procurement policy so that work will continue while Change Orders are being processed.

Responsible Division/Department: Procurement

Construction & Land Management

Estimated Completion Date: Ongoing

Status: Partially Implemented

Management Action: The Office of Enterprise Engineering is currently reengineering the entire contracting process which includes *Change Order* processing

processing.

E. Efficiency and Performance Measurements

E.1. Development of Performance Measures: The Construction Division should develop performance measures.

Responsible Division: Construction **Estimated Completion Date:** December 1995

Status: Partially Implemented

Management Action: The Construction Division selected performance measures that they believe are relevant and incorporated them into the FY96 Construction Annual Report. The performance measures that were selected measure success towards meeting safety, customer satisfaction, diversity, cost, and quality goals. With regard to safety, the Construction Division has a zero accident goal. Customer satisfaction is measured by use of a customer satisfaction survey. A goal of at least 17% participation by M/WBE firms for all contracted work was established. The cost of construction operations is measured by comparing the cost of construction monitoring to the total contract cost. A quality assurance program was established that requires other District personnel, completely unassociated with the project, to review the project based on nine categories of workmanship and materials. We would like to see the Engineering & Project Management Division select some useful

performance measures by which to gauge performance. Additionally, we suggest that the District research how other similar agencies, e.g. the Army Corp of Engineers, are measuring construction project performance.

E.2. Cost of Construction Management Operations: Management should establish practices comparable to those in private industry, such as establishing maximum cost thresholds for the various construction related activities (engineering, construction monitoring and project management) as a percentage of the total contract amount. The cost of construction monitoring services typically ranges between 2% and 4%. Management should also review capital project workloads in relationship to staffing for possible redirection.

Responsible Department: Construction & Land Management

Estimated Completion Date: Ongoing

Status: Implemented

Management Action: The FY96 Construction Annual Report states a goal of 12% for the ratio of staff costs to construction costs. FY96 actual for the Construction Division was 5.4%. The Engineering & Project Management Division considered establishing a similar ratio but concluded that the measurement would be meaningless due to the diverse projects that they develop. Additionally, four individuals have been redirected from CLM to ERD.

F. Capital Expenditure Budgeting and Necessity

F.1. Justification for Construction Projects: Reevaluate the process of justifying the scope and necessity of proposed projects and include the Budget Office in the development phases of the capital improvement program.

Responsible Department: Construction & Land Management

Estimated Completion Date: October 1995

Status: Partially Implemented

Management Action: The Budget Office is included in the development phases of the capital improvement program, however, an appropriate forum should be established that challenges project sponsor=s justification of the scope and necessity of capital projects.

F.2. Five-Year Capital Program: Improve the system for identifying District capital improvement priorities and to incorporate them in the budgeting process.

Responsible Department: Construction & Land Management

Estimated Completion Date: December 1995

Status: Implemented

Management Action: Management redesigned the FY97 and FY98 budget process which now incorporates a comprehensive prioritization of all programs and activities, including capital improvement priorities. The new method was the result of a number of rethinking efforts that began shortly after the release of the audit.

F.3. Machine Shop Size:

! Prepare quantitative analyses to justify capital projects.

Responsible Department: Construction & Land Management

Estimated Completion Date: October 1995

Status: Partially Implemented

Management Action: Management has drafted capital project development guidelines which require that a cost/benefit analysis and business case be prepared to justify certain discretionary capital facility projects.

! Withhold payment from construction engineering and design consultants who perform substandard work.

Responsible Department: Construction & Land Management

Estimated Completion Date: October 1995

Status: Implemented

Management Action: The Engineering and Project Management Division is responsible for reviewing the work of construction engineering and design consultants. Payment is withheld, or cost reimbursement is sought if deemed appropriate.

F.4. S-13 Repowering: Develop a standard cost analysis for various alternatives and consultants should perform a cost benefit analysis of alternatives.

Responsible Departments: Construction & Land Management

Operations and Maintenance

Estimated Completion Date: Ongoing

Status: Partially Implemented

Management Action: Included in the draft capital budget development guidelines is the requirement that a thorough and complete cost/benefit analysis be performed.

F.5. Engine Selection for Repowering: Incorporate life cycle costing into the competitive bid process.

Responsible Departments: Construction & Land Management

Operations and Maintenance

Status: Implemented

Management Action: We reviewed Contract C-E203, which is a contract to supply the engines, right-angle drives, and pumps for pump stations G-310 and G-335 which are part(s) of the Everglades Restoration Project. The bidders are required to provide an estimate of the present value of the maintenance cost, including fuel, as a part of the bid.